

EXECUTIVE SUMMARY SHEET
CITY OF SAN DIEGO

DATE ISSUED: February 22, 2012
ATTENTION: Natural Resources & Culture Committee
Agenda of February 29, 2012
ORIGINATING DEPARTMENT: Public Utilities
SUBJECT: Purchase of Emergency Generators for Wastewater
Facilities -- Information Item
COUNCIL DISTRICT(S): City-wide
STAFF CONTACT: Richard Snow (619) 211-8321

REQUESTED ACTION:

THIS IS AN INFORMATION ITEM ONLY. NO ACTION IS REQUIRED ON THE PART OF THE COMMITTEE.

EXECUTIVE SUMMARY:

On September 8, 2011, San Diego County suffered a regional power outage. Electrical power supplied by San Diego Gas and Electric (SDG&E) to the Public Utilities Department's (Department) facilities was out for approximately 4 to 12 hours, depending on the location. During this period, the Department incurred two sewer spills related to wastewater pump station shutdowns.

The wastewater system operates a total of 82 wastewater pump stations. Of these pump stations, 60 pump stations or 73% have redundant electrical power supplies onsite. Fifty-four pump stations have onsite generators, five have dual SDG&E electrical feeds, and one has two natural gas engine driven pumps. Of the pump stations without redundant power feeds, eight are comfort stations that can be closed, eight overflow to gravity sewers, and six are low flow and can be served by portable generators.

Given the events of September 8, the Department has reviewed all facilities that rely on dual SDG&E electrical feeds for redundancy. Although this method of providing reliability is acceptable per the U.S. Environmental Protection Agency's technical bulletin titled "Design Criteria for Mechanical, Electrical, and Fluid System and Component Reliability," the Department had to consider the probability of losing both electrical feeds due to an extended power outage, earthquake, fire or other incident that could take out multiple substations or the power lines coming into the stations. Although the probability of losing both electrical feeds is still quite low, depending on the length of the power outage, the consequences from a spill could be very high given the amount of flow that is processed through these pump stations.

Therefore, to provide added reliability to the wastewater system, the Department is recommending the installation of diesel backup generators at six critical sites. These include Sewer Pump Stations 1, 64, 65 and Penasquitos, the North City Water Reclamation Plant and an upgrade to the generator at the Environmental Monitoring and Technical Services Laboratory. The generator at the Laboratory will be upgraded from a 250 kW to 400 kW generator to ensure important biological specimens are not at risk of being lost during future extended outages.

In order to expedite the installation of the generators the Department is recommending the prepurchase of seven (7) identical 2,000 kW units. These generators will be installed as follows:

Pump Station 1	Two 2,000 kW portable diesel generators
Pump Station 64	Two 2,000 kW portable diesel generators
Pump Station 65	One 2,000 kW portable diesel generator
Penasquitos Pump Station	One 2,000 kW portable diesel generator
North City Water Reclamation Plant	One 2,000 kW portable diesel generator

The City of San Diego is a member of the National Joint Powers Alliance® (NJPA). This is a governmental agency that leverages the combined national purchasing power of participating government and education agencies to reduce the cost of purchased equipment. This process, which included issuance of an invitation to bid, advertising, timely and responsive submission, bid opening, bid evaluation, and award, resulted in a cooperative purchasing contract which meets all of the City of San Diego's competitive bidding requirements as outlined in Article 2, Division 30 of the City of San Diego's Municipal Code. The Department will purchase the generators through this NJPA. Hawthorne Power Systems is the San Diego area Caterpillar dealer under the NJPA.

These generators will be delivered to the pump station and treatment plant sites within days after the purchase order is issued and will be temporarily installed for quick connection, if needed. The generators are scheduled to be onsite by the end of May 2012.

The portable generators will be permanently installed using a design-built contract that will be brought to City Council for approval under a separate action. The permanent installation will include concrete pads and additional diesel fuel storage for up to three days of use. The permanent facilities will also have automatic transfer switches that will greatly reduced the time it will take to get the generators on line in the event of an emergency. Included in the design build contract will be the replacement of the 250kW generator at the Environmental Monitoring and Technical Services Lab. The permanent installations are scheduled to occur by the end of FY13.

EQUAL OPPORTUNITY CONTRACTING:

This purchase is subject to the City's Equal Opportunity Contracting (San Diego Ordinance No. 18173, Sections 22.2701 through 22.2708) and Non-Discrimination in Contracting Ordinance (San Diego Municipal Code Sections 22.3501 through 22.3517).

FISCAL CONSIDERATIONS:

The total cost for the purchase of seven (7) portable generators and their associated transformers and cables is estimated at \$7,900,000. We are also requesting an additional \$3,800,000 be included in this request to cover the possibility that these engines will need additional emission controls to make them compliant with APCD requirements for stationary generators. Estimates are being verified and will be finalized prior to this item going to City Council for approval. The funds for this project will come out of the Dedicated Reserve from Efficiency and Savings.

The total cost of this project is estimated at \$16,750,000. The total cost includes, engineering, generator procurement, installation, permitting, land acquisition, inspection, and contingency.

PREVIOUS COUNCIL/COMMITTEE ACTION:

The December 6, 2011 Department of Homeland Security report to the City Council on the City Response to the September 2011 Power Outage included the recommendation to install backup generators at wastewater facilities.

COMMUNITY PARTICIPATION AND PUBLIC OUTREACH EFFORTS:

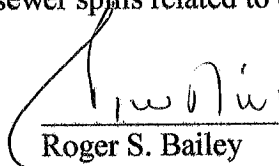
This project was reviewed and approved by the Metro TAC Advisory Committee on January 18, 2012 and the Metro Commission on February 2, 2012. This project was approved by the Independent Rates Oversight Committee on January 17, 2012. This project was presented to the following community groups: Barrio Logan Community Group, Torrey Pines Community Planning Board, Miramar Ranch North Planning Committee, and the University Community Planning Group.

KEY STAKEHOLDERS:

The customers of the Metropolitan Sewerage System will benefit from the added system reliability and the reduction in the probability of sewer spills related to electrical power outages.



Ann Sasaki
Assistant Public Utilities Director



Roger S. Bailey
Director of Public Utilities